

WHAT IS CLAIMED IS:

1. An inspection apparatus for inspecting a circuit wiring of a circuit board, said inspection apparatus comprising:

- 5 a conductive member adapted to be disposed on the side of one of the surfaces of said circuit board and to be supplied with an inspection signal;
 means for supplying the inspection signal to said conductive member;
 a plurality of cells adapted to be disposed on the side of the other surface of said circuit board with opposing to said conductive member; and
10 means for acquiring each signal appearing at said cells in response to said inspection signal applied to said conductive member.

2. An inspection apparatus as defined in claim 1, wherein said conductive member includes a surface formed in conformity with said one surface of said circuit board, and
15 said cells are two-dimensionally arranged in conformity with said other surface of said circuit board.

3. An inspection apparatus as defined in claim 2, wherein said conductive member has a flat plate shape.

- 20 4. An inspection apparatus as defined in claim 1, wherein said conductive member is composed of a plurality of conductive pieces.

- 25 5. An inspection apparatus as defined in claim 2, wherein said cells are arranged in a matrix form.

6. An inspection apparatus as defined in claim 1, which further includes:

 means for generating image data representing the position and shape of said circuit wiring, according to the signals appearing at said cells; and

means for displaying the image.

7. An inspection apparatus as defined in claim 1, which further includes storing means having thereon stored wiring data representing the position and shape of said circuit
5 wiring.

8. An inspection apparatus as defined in claim 1, which further includes:

storing means having thereon stored wiring data representing the position and shape of the circuit wiring;

10 means for detecting a disconnection, short-circuit or chipping in said circuit wiring, or a dust on said circuit board according to the signals appearing at said cells and said wiring data.

9. An inspection method for inspecting a circuit wiring of a circuit board, said inspection
15 method comprising the steps of:

disposing a conductive member on the side of one of the surfaces of said circuit board, said conductive member being adapted to be supplied with an inspection signal;

disposing a plurality of cells on the side of the other surface of said circuit board with opposing to said conductive member;

20 supplying the inspection signal to said conductive member; and

acquiring each signal appearing at said cells in response to said inspection signal applied to said conductive member.

10. An inspection apparatus for inspecting a circuit wiring of a multilayer circuit board
25 having an overall electrode layer, said inspection apparatus comprising:

means for supplying an inspection signal to an overall electrode of said overall electrode layer;

a plurality of cells adapted to be disposed on the side of at least either one of the surfaces of said circuit board with opposing said overall electrode; and

means for acquiring each signal appearing at said cells in response to said inspection signal applied to said overall electrode.

11. An inspection apparatus as defined in claim 10, wherein said cells are adapted to be
5 disposed on both sides of the surfaces of said circuit board with opposing said overall electrode.

12. An inspection method for inspecting a circuit wiring of a multilayer circuit board having an overall electrode, said inspection method comprising the steps of:

10 placing a plurality of cells on the side at least either one of the surfaces of said circuit board with opposing an overall electrode of said overall electrode layer;
supplying an inspection signal to said overall electrode; and
acquiring each signal appearing at said cells in response to said inspection signal applied to said overall electrode.

15 13. An inspection apparatus for inspecting a circuit wiring of a circuit board, said inspection apparatus comprising:
a plurality of first cells adapted to be disposed on the side of one of the surfaces of said circuit board;

20 a plurality of second cells adapted to be disposed on the side of the other surface of said circuit board;

means for supplying the inspection signal to either one of said first cells and said second cells; and

25 means for acquiring each signal appearing at the other one of said first cells and said second cells in response to said inspection signal applied to said one of said first cells and said second cells.

14. An inspection method for inspecting a circuit wiring of a circuit board, said inspection method comprising the steps of:

disposing a plurality of first cells on the side of one of the surfaces of said circuit board;

disposing a plurality of second cells on the side of the other surface of said circuit board;

5 supplying an inspection signal to either one of said first cells and said second cells; and

acquiring each signal appearing at the other one of said first cells and said second cells in response to said inspection signal applied to said one of said first cells and said second cells.

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15. An inspection method for inspecting a circuit wiring of a circuit board, said inspection method comprising the steps of:

disposing a plurality of first cells on the side of one of the surfaces of said circuit board;

15 disposing a plurality of second cells on the side of the other surface of said circuit board;

supplying an inspection signal to said first cells;

acquiring each signal appearing at said second cells in response to said inspection signal applied to said first cells;

20 supplying an inspection signal to said second cells; and

acquiring each signal appearing at said first cells in response to said inspection signal applied to said second cells.

16. An inspection apparatus for inspecting a circuit wiring of a circuit board, said 25 inspection apparatus comprising:

a conductive member adapted to be disposed on the side of one of the surfaces of said circuit board and to be supplied with an inspection signal;

means for supplying the inspection signal to said conductive member;

a plurality of cells adapted to be disposed on the side of the other surface of said

circuit board with opposing said conductive member; and
processing means for acquiring and processing each signal appearing at said
cells in response to said inspection signal applied to said conductive member.

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